What is claimed is:

Sub A1

1. A method for manufacturing a thin film, comprising:

loading a substrate into a reaction chamber;

uniformly terminating dangling bonds on the surface of the substrate with a specific atom;

chemically adsorbing a first reactant onto the terminated substrate by injecting the first reactant into the reaction chamber;

removing any of the first reactant physically adsorbed into the terminated substrate; and

forming a solid thin film by chemical exchange or reaction of the chemically adsorbed first reactant and a second reactant by injecting the second reactant into the reaction chamber.

2. A method for manufacturing a thin film, as recited in claim 1, further comprising removing an impurity layer adsorbed into or formed on the surface of the substrate before loading the substrate into the reaction chamber.

3. A method for manufacturing a thin film, as recited in claim 1, further comprising a step of removing an intermediate reactant generated during the formation of the solid thin film after forming the solid film.

4. A method for manufacturing a thin film, as recited in claim 1, wherein the dangling bonds on the surface of the substrate are uniformly terminated by repeatedly injecting gas including the specific atom at least twice.

5. A method for manufacturing a thin film, as recited in claim 1, wherein the specific atom is one of a oxygen or a nitrogen atom.

6. A method for manufacturing a thin film, as recited in claim 1, wherein the substrate is a silicon substrate.

7. A method for manufacturing a thin film, as recited in claim 1, wherein the first reactant is $Al(CH_3)_3$ and second reactant is H_2O.

8. A method for manufacturing a thin film, as recited in claim 1, wherein a combination energy between an atom comprising the substrate and the specific atom is larger than a combination energy between a ligand comprising the first reactant and the atom comprising the substrate.

9. A method for manufacturing a thin film, as recited in claim 1, wherein the solid thin film is one selected from the group consisting of a single atomic thin film, a single atomic oxide, a composite oxide, a single atomic nitride, and a composite nitride.

10. A method for manufacturing a thin film, as recited in claim 9, wherein the single atomic thin film is one selected from the group consisting of Mo, Al, Cu, Ti, Ta, Pt, Ru, Rh, Ir, W and Ag.

11. A method for manufacturing a thin film, as recited in claim 9, wherein the single atomic oxide is one selected from the group consisting of ~~Al_2O_3~~, TiO_2 , Ta_2O_5 , ZrO_2 , HfO_2 , Nb_2O_5 , CeO_2 , Y_2O_3 , SiO_2 , In_2O_3, RuO_2 , and IrO_2 .

12. A method for manufacturing a thin film, as recited in claim 9, wherein the single atomic oxide is one selected from the group consisting of , $PbTiO_3$, $SrRuO_3$, $CaRuO_3$, $(Ba,Sr)TiO_3$, $Pb(Zr,Ti)O_3$, $(Pb.La)(Zr,Ti)O_3$, $(Sr,Ca)RuO_3$, In_2O_3 doped with Sn, In_2O_3 doped with Fe, and In_2O_3 doped with Zr.

13. A method for manufacturing a thin film, as recited in claim 9, wherein the single atomic nitride is one of SiN, NbN, ZrN, TiN, TaN, Ya_3N_5, AlN, GaN, WN, and BN.

14. A method for manufacturing a thin film, as recited in claim 9, wherein the composite nitride comprises a material selected from the group consisting of WBN, WSiN, TiSiN, TaSiN, AlSiN, and AlTiN.

add cl 7

add A27